

Power Amplifier

0.01-6.5GHz/30dB Gain/34dBm Psat

Model: TLPA0.01G6.5G-30-30

TLPA0.01G6.5G-30-30 is a power amplifier with a minimum power gain of 30 dB and a nominal Psat of 34 dBm across the frequency range of 0.01 to 6.5 GHz. The DC power requirement for the amplifier is +28 VDC/0.5 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 0.01-6.5GHz
- Gain: 30dB Min
- Output Power Psat: 34dBm Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	0.01		6.5	GHz
Power Gain	30	35		dB
Gain Flatness		±3	±4	dB
Output P1dB	30	32		dBm
Output Psat	33	34		dBm
Spurious@Pout=30dBm			-60	dBc
Harmonics@Pout=30dBm			-8	dBc
Input VSWR		1.5	2	:1
DC Voltage	26	28	30	V DC
DC Supply Current		0.5	1.3	A
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Size	90.2*70*15	mm
Weight	250	g

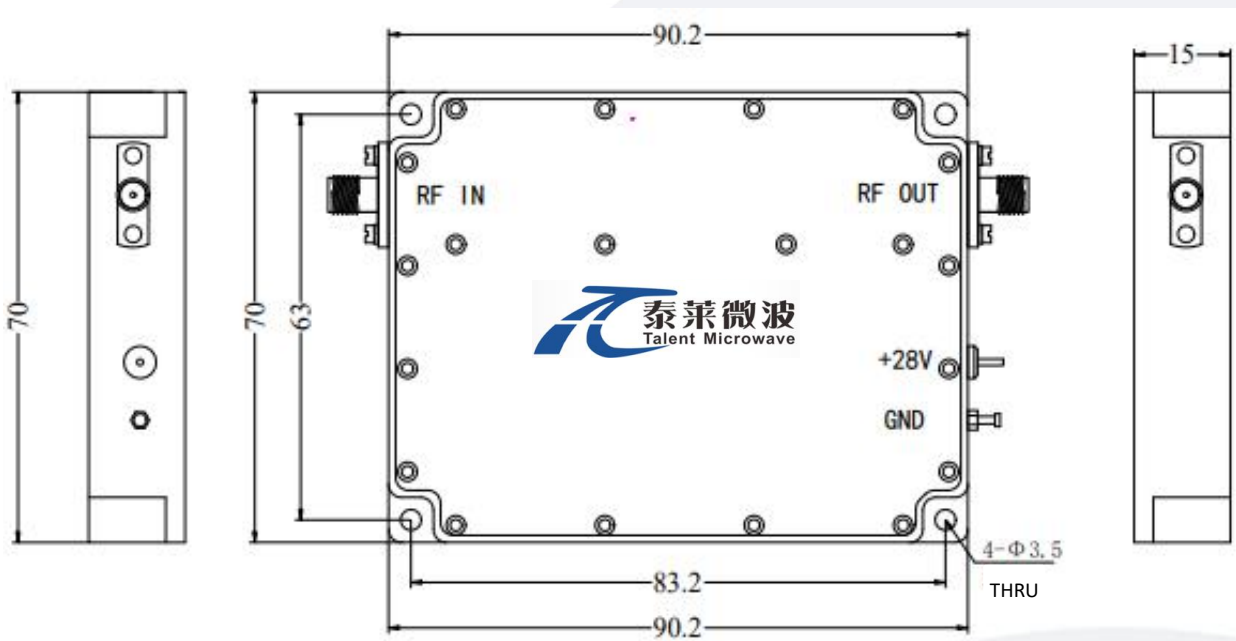
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+13 V
RF Input Power	+5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



Outline Drawing:

Unit:mm



*****Heat Sink Required During Operation**



ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-40		+60	°C
Non-operating Temperature*	-50		+70	°C
Relative humidity		95		%
Altitude	30,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

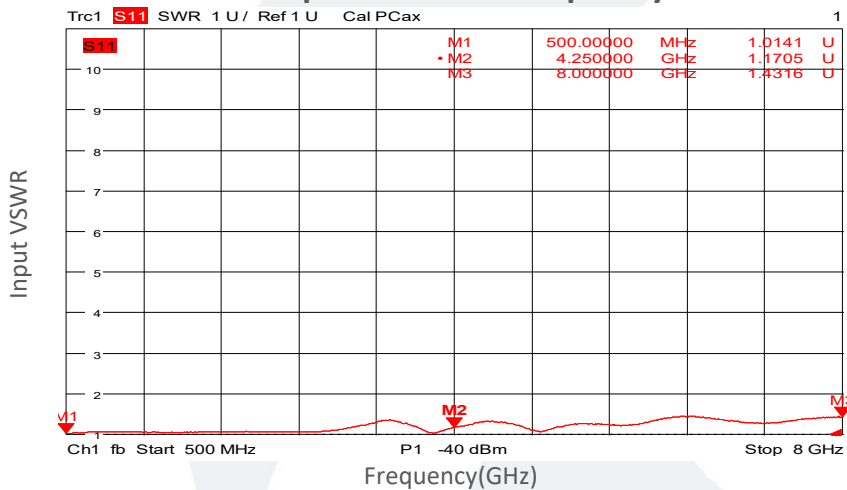
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

Base Number	Description	Revision
TLPA0.01G6.5G-30-30	Power amplifier 0.01-6.5GHz, Gain:30dB,Psat:34dBm,+28VDC,Without Heatsink.	Rev.1.1
TLPA0.01G6.5G-30-30-HS	Power amplifier 0.01-6.5GHz, Gain:30dB,Psat:34dBm,+28VDC,With Heatsink.	Rev.1.1

Typical Performance Data:

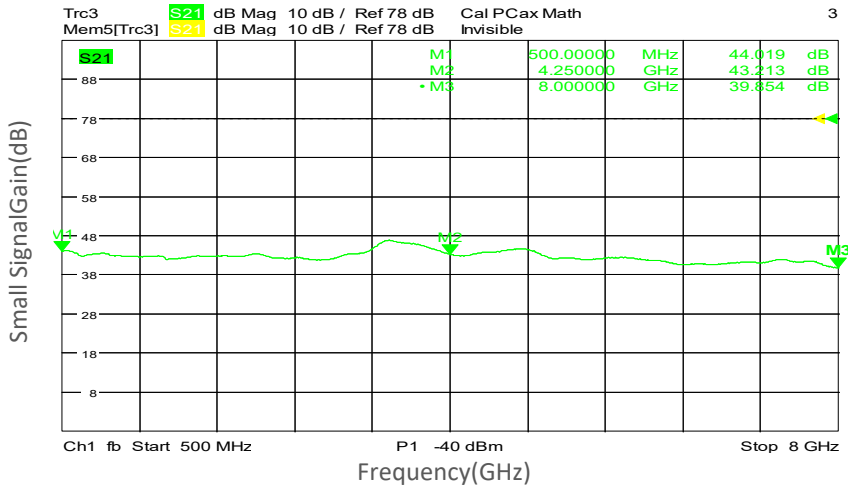
Input VSWR vs Frequency



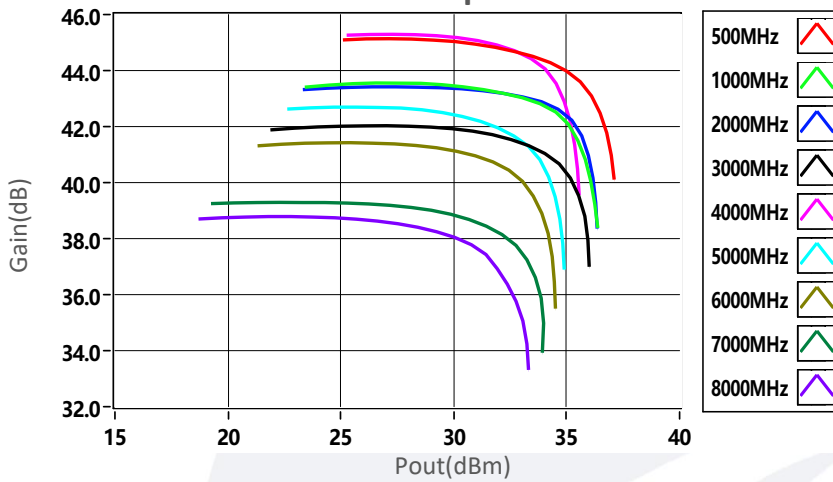
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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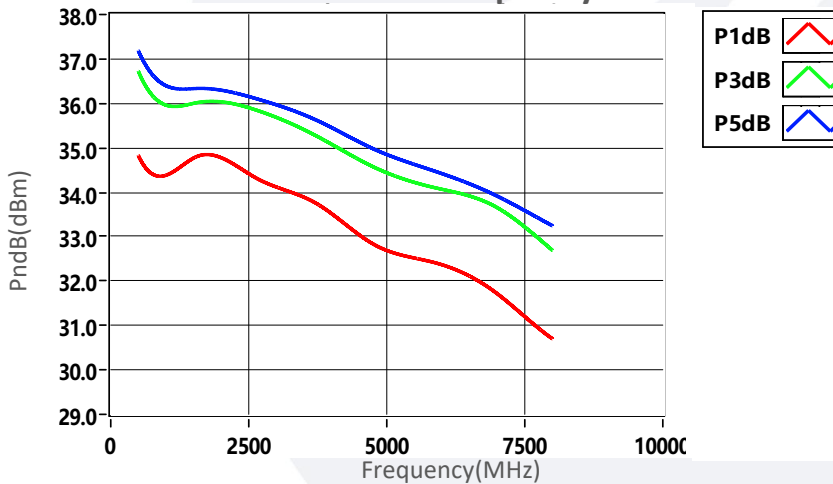
Small Signal Gain vs Frequency



Gain vs Output Power

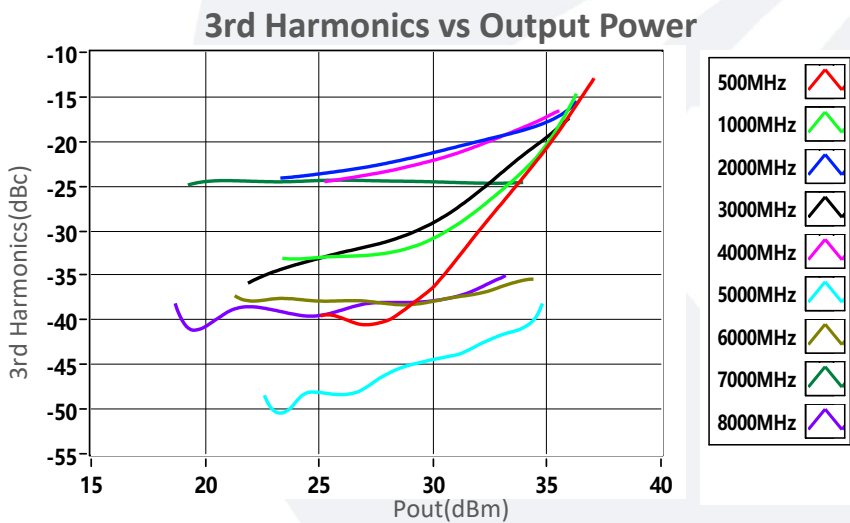
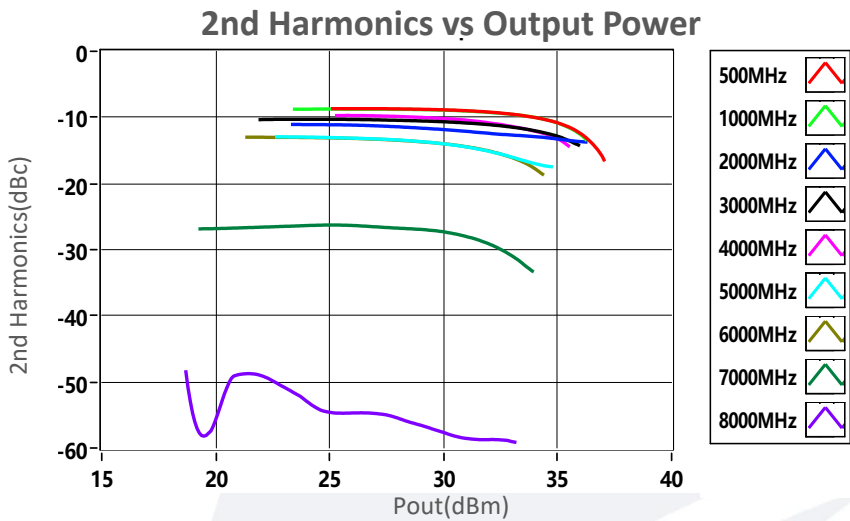
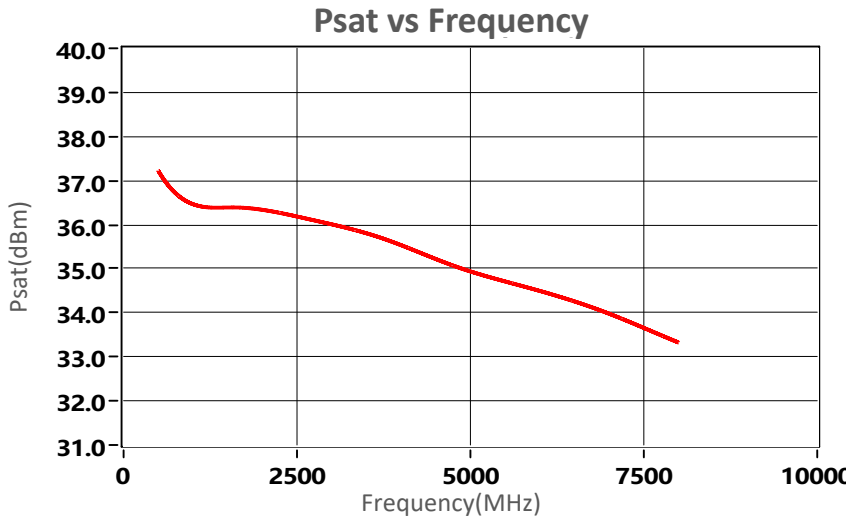


PndB vs Frequency



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